Safety Talk

Asbestos Awareness

Before you begin

Note: This lesson provides an overview of asbestos awareness. It doesn't replace the asbestos awareness training required under the Occupational Safety and Health Administration's (OSHA's) Asbestos Standard, 29CFR 1910.1001(j)(7)(iv).

Review blueprints and specification sheets for the building(s) in question. Determine the age of the building(s). Obtain copies of any asbestos surveys and/or abatement reports. Provide a list of any known asbestos-containing materials in the building(s). If no survey exists, be prepared to identify questionable materials that you should leave undisturbed until examined (i.e., samples are obtained).

Introduction

Asbestos is the name given to a group of naturally occurring minerals that are resistant to heat and corrosion. Asbestos has been used in products, such as insulation for pipes (steam lines for example), floor tiles, building materials, and in vehicle brakes and clutches. Asbestos includes five different mineral fibers with chrysotile being the most common. Heavy exposures tend to occur in the construction industry and in ship repair, particularly during the removal of asbestos materials due to renovation, repairs, or demolition. Workers are also likely to be exposed during the manufacture of asbestos products (such as textiles, friction products, insulation, and other building materials) and during automotive brake and clutch repair work.

The following list, compiled by the U.S. Environmental Protection Agency (EPA), includes potential asbestos-containing materials.

- Roof coatings and roofing felt
- Flooring felt
- Pipeline wrap
- Asbestos clothing
- Vinyl/asbestos floor tile
- Automatic transmission components
- Clutch facings
- Disc brake pads
- Drum brake linings and brake blocks
- Commercial and industrial asbestos friction products
- Sheet and beater-add gaskets (except specialty industrial)
- Commercial, corrugated and specialty paper
- Millboard

In the late 1970s, the U.S. Consumer Product Safety Commission banned the use of asbestos in wallboard patching compounds and gas fireplaces. In 1989, the U.S. EPA banned most asbestos-containing products. This rule was overturned in 1991. Currently, there are a few specifically banned materials, including flooring felt, rollboard, and corrugated commercial or specialty paper. Use of asbestos in products that did not historically contain asbestos is also banned.

Asbestos is well recognized as a health hazard and is a known human carcinogen. Its use is now highly regulated by both the OSHA and the EPA. Asbestos fibers associated with these health risks are too small to be seen with the naked eye. Breathing asbestos fibers can cause a buildup of scar-like tissue in the lungs called asbestosis and result in loss of lung function that often progresses to disability and death. Asbestos also causes cancer of the lung and other diseases such as mesothelioma, a cancer of the lungs' linings. Mesothelioma may not show up until many years after asbestos exposure.

Definitions

- **Friable** – Those materials that when dry can be crumbled, pulverized, or reduced to powder by hand pressure such as sprayed-on fireproofing.
- **Non-Friable** – Those materials that when dry cannot be easily crumbled, pulverized, or reduced to powder by hand pressure such as building siding. Non-friable materials can become friable if damaged or altered.
- **Asbestos Containing Materials (ACM)** – Any material containing more than 1% asbestos.
- **Presumed Asbestos Containing Material (PACM)** – Installed thermal system insulation as well as sprayed-on and troweled-on surfacing materials found in buildings constructed no later than 1980 are presumed to be asbestos-containing materials.

Discussion

There are federal EPA, OSHA and Ohio EPA regulations covering ACM. Regulations primarily focus on the removal of materials and prevention of contamination during removal activities. The Ohio EPA certifies contractors performing asbestos removal projects, project supervisors, project designers, workers removing asbestos, persons inspecting buildings for asbestos-containing materials and developing plans to manage asbestos found in a facility, persons conducting air sampling for asbestos and the companies that provide required asbestos training.

OSHA regulations reduce the risk to workers by requiring that employers provide personal exposure monitoring to assess the risk and hazard awareness training for operations where there is any potential exposure to asbestos. Airborne levels of asbestos are never to exceed legal worker exposure limits. There is no "safe" level of asbestos exposure for any type of asbestos fiber.

You can find OSHA regulations in the asbestos standard for:

- General Industry (1910.1001) – This covers work that could include exposures such as brake and clutch repair, maintenance work, and manufacturing of asbestos-containing products.
- Construction Industry (1926.1101) – Covers construction, alteration, repair, maintenance, renovation, and demolition of structures having asbestos.

Building Owners/Employers must:

- Determine the presence, location, and quantity of ACM and/or PACM at the work site. Employers and building/facility owners must exercise due diligence in complying with these requirements to inform employers and employees about the presence and location of ACM and PACM. Maintain records of the above information for the duration of ownership and transfer these records to successive owners.
- Inform other employers and their own employees who will perform housekeeping activities of the presence and location of such materials.
- Post signs at entrances to mechanical rooms/areas that contain ACM/PACM.
- Identify previously installed ACM/PACM with labels or signs.
- Provide training dependent on workplace exposure, from awareness training to job specific training.

Conclusion

You can't identify asbestos-containing materials with the naked eye. Experienced inspectors can identify suspected materials. However, they must confirm their findings via laboratory analysis. Workers should not disturb, move or clean up damaged building materials that could contain asbestos. These materials include:

- Hard pipe insulation that looks like plaster.
- Corrugated paper pipe insulation.
- Sprayed-on insulation.
- Drywall.
- Mastic.
- Hard wall plaster.
- Ceiling tiles (12" x 12" or smaller).
- Crumbled floor tiles (9" x 9" have high probability).
- Vermiculite.

Report any of the previously mentioned items to a supervisor or other designated person. If you see someone cutting, sanding, or otherwise damaging these materials, stop them and ask if the material has been identified as non-asbestos. Remember, asbestos fibers can be in the air even if visible dust is not present.

Group activity

As a group discuss what materials employees may encounter that could have the possibility of containing asbestos?

Resources

- OSHA: Safety and Health Topics – Asbestos
- United States Environmental Protection Agency: Asbestos
- NIOSH: Asbestos
- Ohio Environmental Protection Agency: Asbestos